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NOTES ON SOME BUSHMAN IMPLEMENTS

BY

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NOTES ON SOME BUSHMAN IMPLEMENTS[1]

By BENE van RIPPEN

THE Bushmen implements described and portrayed in these notes were collected in South Africa during a visit made in 1917. It is the writer's intent to enlarge this collection at the earliest possible opportunity, as the Bushman material is rapidly becoming extinct, and whatever is still to be gathered is difficult to obtain.

Many implements could have been obtained which were made by Bushmen, but which were not those used by them originally as far as I know. They include carved walking sticks, carved wooden household dishes, pots and pans, large and small spoons, iron assegais, knob-kerries and many others of Bantu origin and design. They may be interesting to show the manual dexterity of a vanishing race but are worthless as ethnological specimens.

A prominent Bushman authority traveled through the Kalahari from 1905–1907, and collected ninety-one Bushman implements of different descriptions, and donated them to one of the larger museums in Europe. The writer feels free to challenge the correctness of the statement that they are all "Bushman implements."

The "Tikoe" or t''koe

There is probably no implement with which we associate the Bushmen as much as the digging-stick and stone or "kibi." Everyone in South Africa knows these stones which are familiar objects in the country. The Boers use them, suspended from a rope as weights, to keep the cattle gates closed. They are also placed on the floor against the front door to prevent it from closing. Stone B in plate VI shows a flat surface around the perforation caused by its having been used for that purpose.

That this type of stone was used by the Bushmen is beyond

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[1] These are now in the Peabody Museum of Archaeology Harvard University.

28850

question. They are represented in their paintings, in their folklore,[1] and were seen many times in actual use by them (fig. 18). But it is an open question whether all perforated stones are of Bushman origin.

Dr. Peringue, director of the South African Museum, at Cape Town, when on a visit to a Bushman family, threw one of these stones in front of an old Bushman asking him what it was and for what it was used. The old man took a stick, placed a horn at the lower end of it and pushing the stick through the perforation said that this was the way it was formerly used to dig roots. The photograph shows a Bushwoman using such a digging-stick. Bleek[2] thinks it probable that the kibi was used only by the women and not by the men, in which he is corroborated by Dornan.[3]

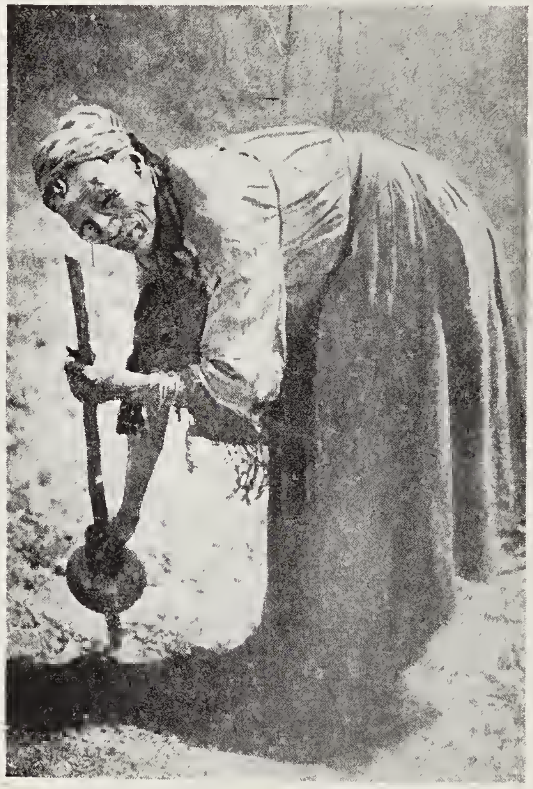

FIG. 18.—A Bushman woman using a digging stick or "kibi." From W. H. I. Bleek. Bushman Folklore. (London, 1911), p. 326.

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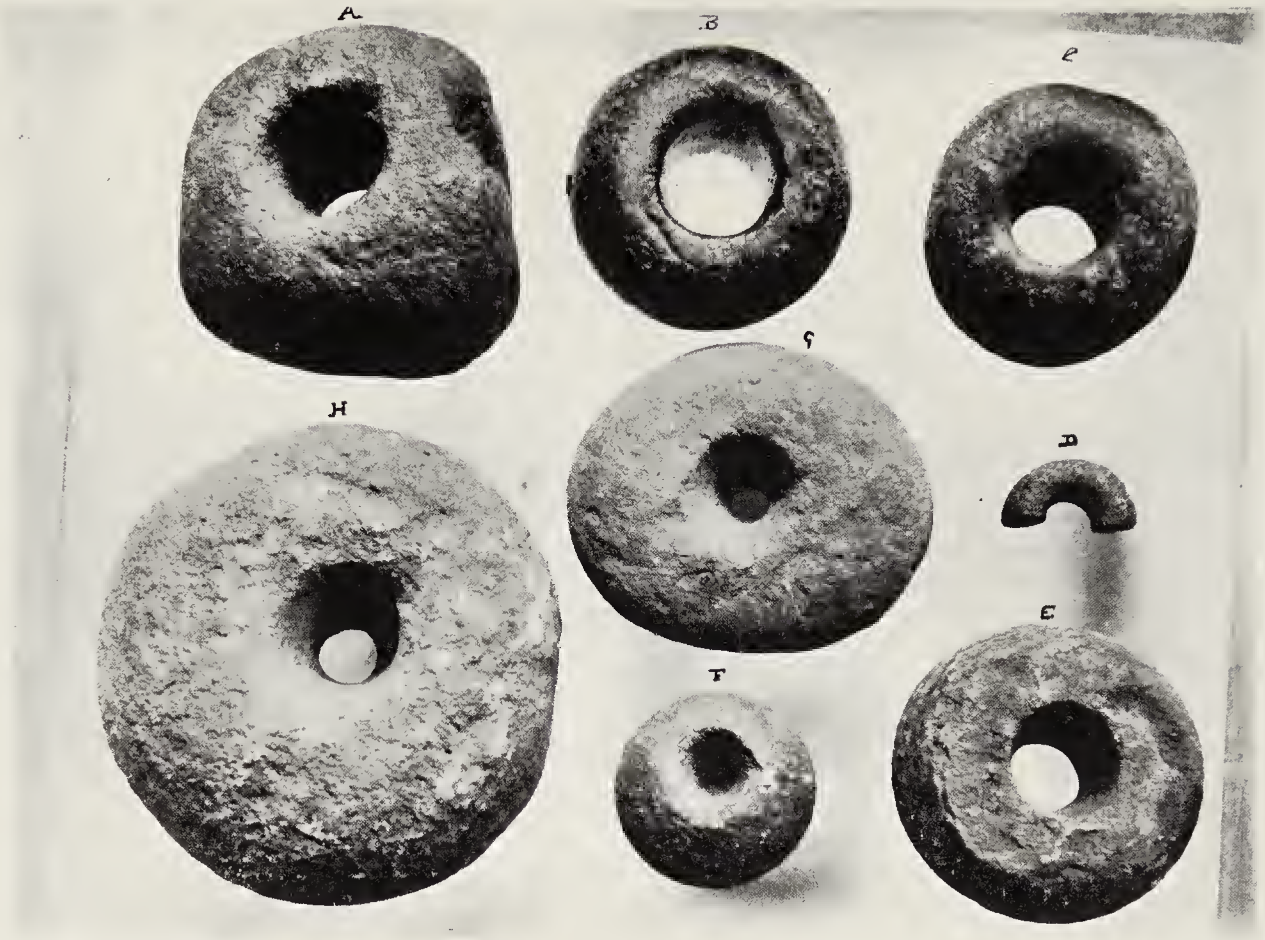
[1] Bleek, p. 361. A bibliography will be found on page 96.

[2] *Ibid.*, p. 361.

[3] Dornan, p. 49



STONES: B, C, AND D ARE FROM THE ORANGE FREE STATE; E, FROM WESTERN TRANSVAAL; F, FROM CAPE COLONY; A, G AND H ARE FROM THE LYDENBURG DISTRICT, TRANSVAAL

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Stones B, C, D, E, and F plate VI are what may be called typical Bushman stones. These types have a general similarity in size, shape, weight, and diameter of the perforation. They are more or less spherical in outline, although the horizontal diameter exceeds the vertical one. Their workmanship is very good as a rule. B, C, and D show distinct usage at the inner surface of the perforation, which is slightly constricted at its centre.

Stones A, G, and H are entirely different from the Bushman type, first in size, second in weight, and third in the shape of the perforation, which is very much constricted at the center, contrary to the Bushman type, which is only slightly so, particularly A and H which can hardly be considered Bushman stones. It would be impractical and wholly unnecessary to carry such large and heavy stones, weighing up to fifteen pounds, on their nomadic wanderings. This may be substantiated by a statement of Miss Lemué, quoted by Stow,[1] saying: "The t''koe was such a valuable article with the Bushmen that it was never left behind or thrown away."

That all perforated stones are not used for the digging-stick may possibly be shown in stone D, which having a typical Bushman outline and workmanship can, on account of its small weight, not be considered a valuable adjunct as such.

But if these specimens, both light and heavy ones, were not digging-stick stones and not used by Bushmen, by whom and for what purpose were they used? This is a question difficult to answer. The writer was informed that some of the Bantus tie them to the tail of an ox to keep him from running away.

Some of the Transvaal natives on the Hoogveld use small perforated stones at the present time on a walking stick, which is carried upright in the hand in the characteristic native fashion. Both of these usages may be customs, recently adopted, after finding these stones about in great numbers. The stones illustrated, ranging in weight from two to fifteen pounds, leave a grave doubt as to their being used for one purpose.

The writer was unable to ascertain if any perforated stones were ever found in kitchen middens or Bushman graves. One stone, according to Barber,[1] was found in a Kimberley diamond mine at a depth of forty feet. This observer does not believe the Bushman made the t''koe, although they used them. Continuing, he says:

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[1] Stow, p. 67.

> The idle, erratic Bushman, with his wandering thriftless habits, living upon roots, or passing through the country in search of game, ostrich eggs, etc., or following the locust swarms for weeks together, living with them, and sleeping where they sleep, day after day, through storm and sunshine, was not a man to devote hours of labor to this work, neither would he carry them about. However, their great antiquity cannot be doubted, judged by the places where they are found.

Passarge[2] substantiates this in part by saying:

> The rough, wandering life does not allow but the simplest and few light household articles easy of transportation.

Staudinger[3] discussing the perforated stones contends that they have nothing to do with the Kibi theory, and remarks:

> Not all perforated large and small stones were digging-stick stones, as may be seen in the different Bushmen paintings. In the Nile district north of Victoria Nyanza, perforated stones were found to be used for clubs. A large perforated stone was collected in the interior of the Kamerun.

Theal[4] says:

> There was one stone implement on which much time and labor was spent. When the Europeans came they saw them use these stones but was unknown in very remote times. It was a spherical boulder, 9 to 14 cm. in diameter. Smaller sized stones have been found occasionally in former Bushman abodes.

In consideration of (1) large size and weight, (2) small size and weight, (3) different type of perforation, (4) poor workmanship in some, and the statements of these various observers quoted, substantiate the conclusion based on the analysis of the illustrated specimens, that they are not all true Bushman stones or t''koes.

Passarge[5] found no stones in the central Kalahari, although there was plenty of material suitable for the purpose of making them. He thinks they may have come from the Hottentots in the south. The sand in the Kalahari is soft and they need no stone to weight the stick, while in the southern part the soil is hard where the stone is an advantage.

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[1] Barber, p. 302. This quotation and several following ones are given freely, not *verbatim*.—Ed.

[2] Passarge, p. 33.

[3] Staudinger, p. 175.

[4] Theal, p. 39.

[5] Passarge, p. 4.

The stone, according to Stow,[1] was made by

> chipping a selected boulder of proper dimensions to a round shape. The perforation was made by chipping with a piece of Lydite. At first, a slight indentation was made at each end of the stone, in which a few drops of water was alternately placed and allowed to stand all night. The next morning a little more was chipped out. This was repeated and thus by slow degrees a large hole was at last worked through, which was smoothed and fitted for use.

Dornan,[2] who studied the Masarwas, says:

> The hole was made by working from both sides and the drill had been of wood, with water and sand to form the cutting material. As the stick would wear away, the hole would get narrower.

The writer is also of the latter opinion based upon examination of stone F, which clearly proves that in this case a rotary movement was used as circular lines may be seen in the smooth surface, dismissing the chipping method without a question. It is possible, if not probable, that the start was made by chipping.

QUIVER

The quivers are of different lengths and widths, the two here illustrated, B and C, plate VII, are 64 and 78 centimeters respectively; their diameters are five centimeters. The three remaining specimens in the collection vary from 57 to 70 cm. in length and their diameters from 5 to 7½.

The Bushman quiver is made from the "kokerboom" or quiver tree, named so by the early Boers on account of its being used for this purpose. The Bushman would remove the fibrous wood from a section of a bough and utilize the cylinder of tough bark as a receptacle for his poisoned arrows.

The botanical name of this tree is

> *Aloe dichotoma*[3] which are believed to be of an immense age; the oldest Boer Voortrekkers will point to small trees growing close to their watering places, telling one that they have not sensibly increased in size in half a century.

Some of the quivers are very well finished while other specimens are of a very hasty and rough construction and poor workmanship.

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[1] Stow, p. 67.

[2] Dornan, p. 49.

[3] Scully, quoted by Sim, Thomas R., p. 343.

The bottom of the quiver is made by stretching thin antelope hide (springbok preferred) over one end fastened with sinew or some sort of dry grass. Both the bottom and top of the quiver are reinforced with sinew, and so are the center and mid-centers, making it a very strong and rigid quiver.

The strap is fastened at the ends by the reinforcement sinew. The perforations in the quiver, seen in the illustration, are natural ones in the bark. When on a long march, the Bushman carries his quiver over the shoulder, but when hunting, it is carried in the right hand.

Bows

The Bushman bow is a very simple specimen of its kind. It shows no carvings or decorations of any description. The wood selected is very tough and usage has given it a chocolate brown color. The bow is rounded and roughly polished. It is thickest in the center and gradually tapers down at the ends almost to a point. This pointing is a very characteristic mark which one finds on almost all bows made and used by Bushmen. Passarge[1] speaks of this and attaches great value to it in recognizing the bow as being genuine. The approximate ends are reinforced with sinew, as may be seen in the illustrated specimen on plate VII.

The bowstring is made from thin sinews twisted together to form a strong cord tied loosely to the ends of the bow. A lack of reinforcement sinew at this point would suggest a free sliding up and down and an easy release and setting of the bowstring. This statement, however, does not coincide with Dornan, who says:

> the bows are permanently strung, and consequently lose much of their elasticity.

The latter seems incredible when we know the Bushmen to be expert hunters, yet, on the other hand, we may add to this that the bow as a whole is an unworthy product of a true hunting race.

Dr. Peringue, director of the South African Museum, in Cape Town, during a conversation with the writer in June, 1917, said that the Bushman would seldom discharge an arrow at a long distance object. He would instead approach the game very closely,

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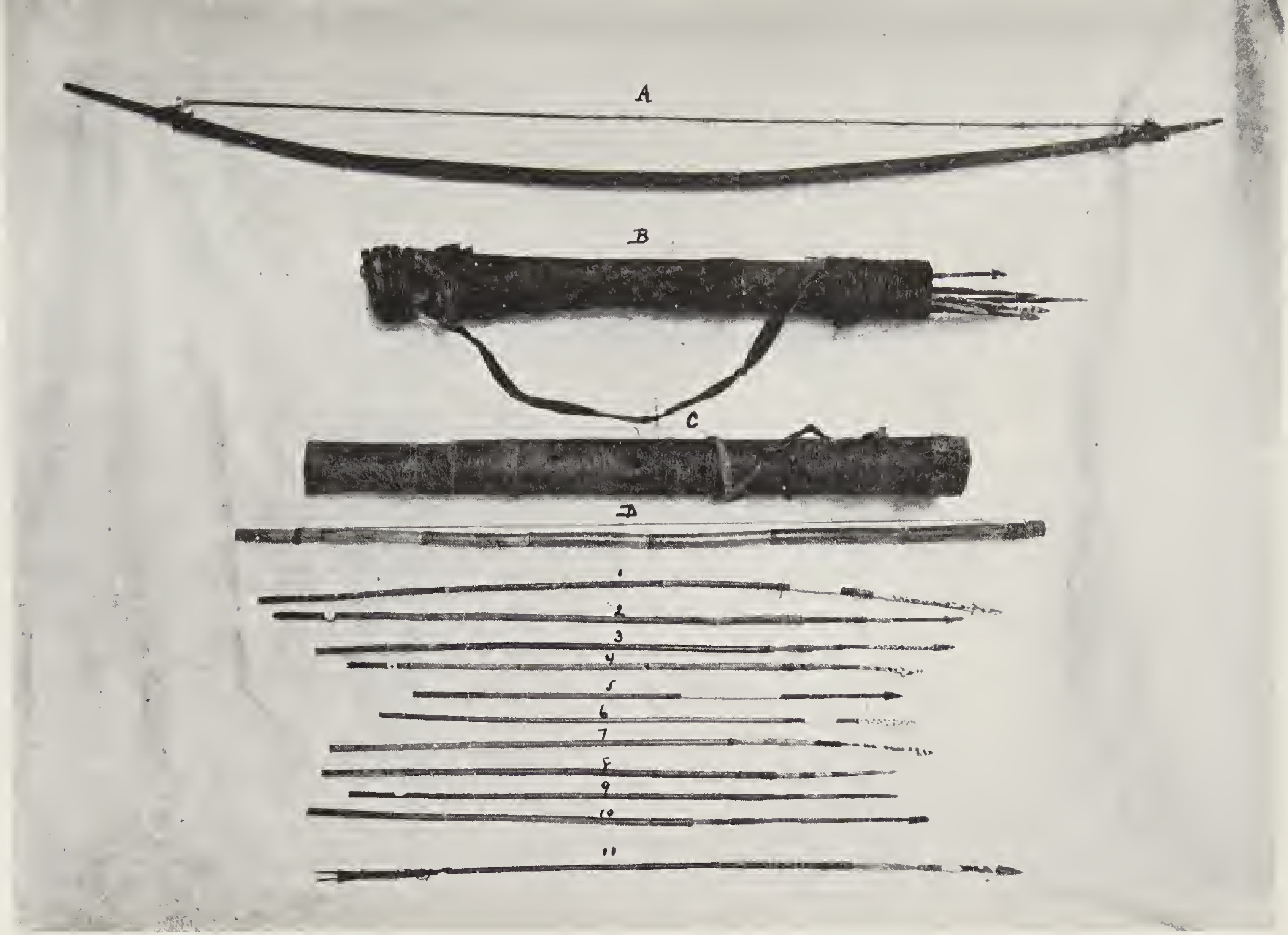
[1] Passarge, p. 59.

[2] Dornan, p. 37.



MUSICAL INSTRUMENT AND WEAPONS: A, BUSHMAN BOW; B AND C, ''KOKERBOON QUIVERS''; D, T''GOERA; 1–11, POISONED ARROWS

and being an expert stalker, and knowing the different animals in all their moods and movements, succeed in doing this without being detected. He would discharge his first arrow and the animal, not knowing whence the missile came, would often run towards the Bushman, allowing him to discharge a few more. From this we may see that such a mode of hunting does not require a very strong bow, which may explain the comparative insufficient development of this implement.

Bleek[1] mentions that there are Bushman tribes in some parts who make no bows, in which he is supported by Owen, neither do they carry them. Rickard[2] suggested that the bow was a recent acquisition by the Bushmen, but Fielden,[3] after a comparison between prehistoric arrowheads with those of later times and types, showed to him a close relationship between them and could not entertain the correctness of Rickard's suggestion.

ARROWS

The Bushman arrow is uniquely constructed and is a very ingenious hunting device. No other savage tribe seems to have arrows of a similar construction. This winged messenger of death was poinsoned and was feared by all those who had come in contact with these people, or had heard from others about the dangers of these poisoned reeds. The writer once called a few blacks to examine one of these arrows, and informing them as what it was they made frantic faces and moved away, leaving him standing alone with the arrow in his hand. These natives had never seen a Bushman, but they said later that they had heard about them from their old people.

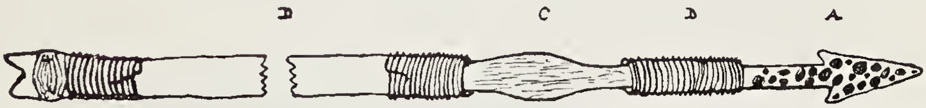


FIG. 19.—Arrow: *A*, arrowpoint with poison; *B*, connecting reed or "release"; *C*, foreshaft; and *D*, shaft.

An attempt to illustrate the arrow may be seen in the drawing (fig. 19) showing the four parts of which these arrows consist. B was called "release" for want of a better name. It was here where the arrow in active hunting divides into two parts.

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[1] Bleek, (*a*).

[2] Rickard.

[3] Fielden, p. 163.

The arrowpoints are made from (1) stone, (2) bone, (3) wood, (4) porcupine quill, (5) iron, (6) glass.

The stone arrowpoints are the oldest specimens, while iron and glass are products taken from the Bantus and Colonists respectively.

The majority of the arrowpoints in this collection are made of bone; one is of iron, two of wood, and two of quill.

Passarge[1] tells us that the bone arrowpoints are made by splitting the bones of the giraffe and ostrich with an axe and are finished with sharp stones. Stow[2] mentions the use of the long bones of the ostrich.

The different shapes are shown from the drawing (fig. 20) and also the method of affixing the poison either in small areas dipped on the point or smeared in a rough fashion all over the surface.

The iron arrowpoint illustrated in A is wound about with sinew. This was done apparently to insure a more stable adhesion for the poison which would not be very strong if it was applied to the metal directly, in which case it would scale off with the formation of rust. This particular arrowhead is a very long and heavy one, and would seem a very impractical hunting implement, weighting the forward end too much.

The "release" and the upper and lower ends of the shaft are lashed with sinew to prevent splitting of the reed of which they are made.

The foreshaft is made from bone, wood or quill. When using the quill, its natural shape and appearance is not altered, and in case bone is used, it is straight with very little narrowing at either end. This changes, however, when wood is selected, in which case the center is sometimes twice the diameter of that of the ends. This may be verfied by comparing arrows 3, 4, 7, 9, and 11 (pl. VII), of which the foreshafts are made from wood, the others being from bone or quill.

It will be noticed that when quill is used for the arrowpoint the foreshaft is found to be absent. Almost all the foreshafts are fastened with some sort of adhesive substance in the shaft, but some are simply inserted as tight as safety permits without splitting the shaft.

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[1] Passarge, p. 59 and 86.

[2] Stow, p. 68.

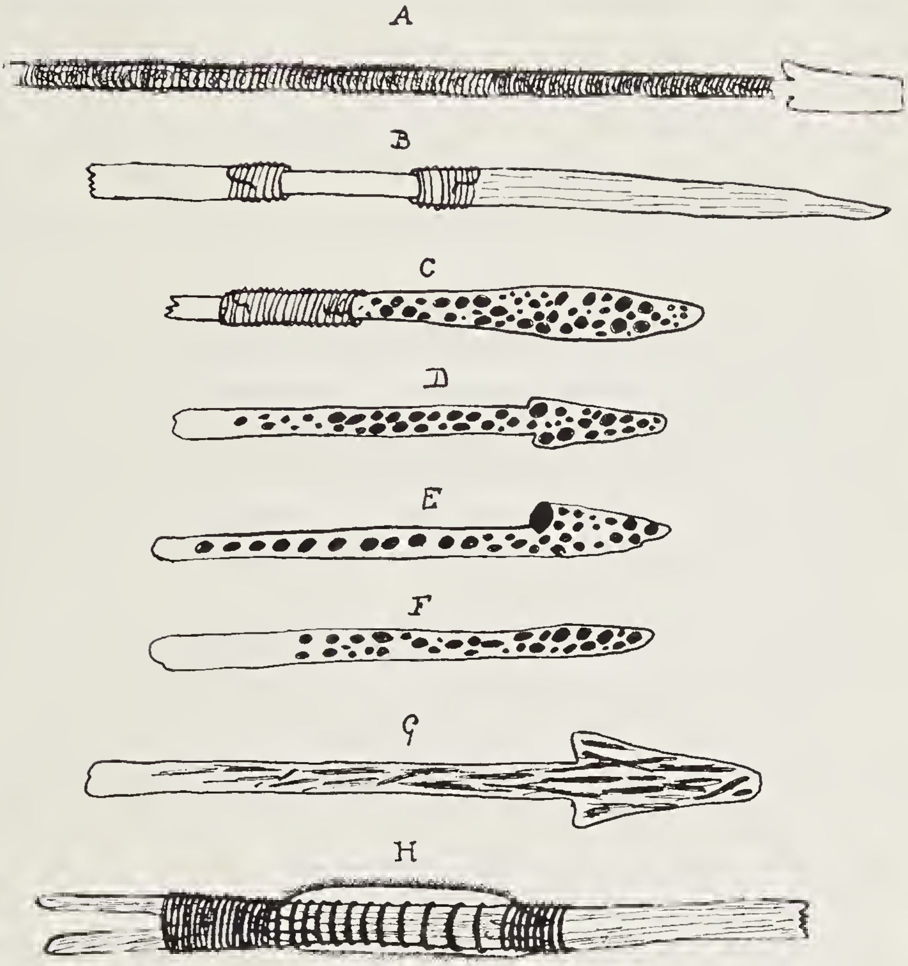

FIG. 20.—Arrows: *A*, iron arrowpoint surrounded with sinew; *B*, porcupine quill, arrowpoint; *C*, *D*, *E*, *F*, and *G*, bone.

Theal mentions a cement used for this purpose, saying

> The adhesive substance used to fasten the different parts more strongly together, was made from the juice of some round fruit, the juice of which was white and looked like water. It was a poison. This juice was warmed and stirred. After cooling, it was gathered on a stick ready for use. The Boers called this "harpis." This is probably derived from the Dutch "harpuis"—rosin.

The purpose of the foreshaft is a disputed question. One traveler mentions its purpose to be the weightening of the arrow to insure a more stable course. This statement does not seem to be proven by facts when the several arrows are examined, after which the conclusion presents itself in contradiction to this.

First: The lightest arrowpoints (quill) have no foreshaft, as seen in arrow no. 8.

Second: The heaviest arrowpoint (iron) has a foreshaft, arrow no. 10.

The former should have a foreshaft if weight was its purpose, while the iron specimen should not have one, it being heavy enough by itself.

The writer has come to the conclusion that the purpose of the foreshaft was an economical and practical one, allowing the Bushmen to make and carry fewer shafts. The arrow after discharge will divide in two at the release, the poisonous point remaining with the animal, and the rest falling down; which in turn is picked up again by the Bushmen and made ready for immediate use by inserting a new arrowpoint.

This conclusion is supported by reproductions in some of their paintings, where one may see a Bushman carrying the arrows on his head stuck into his hair. These could not be complete arrows, first, because they would be too long and heavy, and would not remain in their position, and secondly, because they would easily catch in the brush during stalking. Therefore, the paintings probably represent the points only.

Theal speaks about the Bushmen carrying arrows on their heads to look more formidable at the approach of an enemy, but speaks distinctly of arrows as such and hence does not support my conclusion.

If the foreshaft is not for weighting the arrow and not a device to enable rapid adjustment of a fresh arrowpoint, what may its purpose be?

The shafts in this collection are made from a reed which possibly may be the *Phragmites communis* or an ally, which is usually many noded but the base may have long internodes. It will be seen that arrows 3, 5, 6, and 7 have no nodes, while the rest show many nodes with the exception of arrow 11 having one node.

The *Phragmites communis* grows in the Kalahari region, Natal, Basuto Land, and for that matter is almost cosmopolitan, it being also used in England and South America for the same purpose.

Arrow 11, probably not a Bushman specimen, is made from a bamboo which may be an *Arundinaria tesselata*, which grows in the Kalahari region, Natal, Table Mountain, and the South African coast region. The "Bamboesberg," one of the Drakensbergen is named after it. These canes are also used for assegais or spear-handles.

The Bushmen did not feather their arrows, as far as the writer is aware. Only one of the specimens is feathered, and is of the same general structure except for this and for the different style of notching. Passarge[1] could never find any feathering in Bushman arrows, but Fritsch[2] maintains that Peter Kolbe relates that the Hottentots carried them. Professor Weule quoted by Passarge,[3] maintains as a result of his studies, that the feathering preceded the leaf-tree used by the Pygmies, and hence is a close ethnic relationship.

That the feathering was present in but a few arrows and then in those which had iron arrowheads made him conclude that they were found only as war arrows and that the custom was lost when arrows were used for hunting. He maintains that this is one of the links connecting the Bushmen and Pygmies. Passarge himself also maintains that arrows with one feather were in use once in Southern Africa. Lichtenstein collected them and Hahn makes mention of them also. According to Weiner, the feathered wooden arrows are used for bird hunting. In the central Kalahari feathering is unknown.

That the Bushmen feathered their arrows is unknown to the writer, and more competent observers claim they did not. The Bantus generally do it, and apparently the Hottentots also. The conclusion that the Bushmen used iron for arrowpoints and lost the use of it is in contradiction with that which is known about them in South Africa where stone and bone preceded the iron, and is speculative to say the least.

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[1] Passarge, p. 59.

[2] Fritsch, p. 73.

[3] Passarge, p. 87.

Arrow Poison

It was the art and secret of making the poison which made the Bushman a successful hunter and a dangerous enemy. The different sources at our disposal mention many ingredients from both the vegetable and animal kingdoms. They are: juice of the *Euphorbia striata*, poisonous spiders, caterpillars, juice of the *Ococanthera venetata*, *Amyrillis distichia*, crushed insect of the genus *Diamphidia*, pulp of venemous worm, a species of bulb containing *Haemanthos toxicara*, snake venom, poisonous ticks, plants, leaves and berries.

Stow[1] informs us that

> The Bushmen of the West use the trapdoor spider for one of their most virulent preparations. Two bites of this spider kill a tree frog in a few seconds, the death preceded by trembling and convulsions.

He also says that they have "poisons of different strengths for the different animals."

Those of the east use principally the venom of snakes, the milk of the *Euphorbia*, and the extract from the poison amaryllis.

Those of the north, according to Livingston, use the "Entrails of the N'gwa caterpillar, for their strongest poison."

Galton[2] describes the poison to be of "many ingredients and of a secret manufacture. Besides vegetable poisons" a Bushman informed him that, "the poisonous black spider (a kind of tarantula) was an important ingredient." Bryden[3] says that the

> Masarwas of the Kalahari use the N'gwa caterpillars, snake poisons, and the milk of an *Euphorbia*, but the actions of these poisons were very slow.

Passarge[4] describes

> a scrub with three pointed leaves on which larvae are found 1 to 1½cm. long, thick, flesh colored, having a grey and a dark brown stripe on their backs, and a hard body covering.

These larvæ are collected by the Bushmen and placed in grass, and left to become cocoons, which are very poisonous, ready for immediate use.

But Dornan[5] describes the making of the poison among the Masarwas and says:

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[1] Stow, p. 78.
[2] Galton, p. 287.
[3] Bryden.
[4] Passarge, p. 52.
[5] Dornan, p. 47.

The poison bags are extracted from the snakes, dried and pounded into dust, mixed with the juice of the *Euphorbia*, or *Ococanthera*. This is repeatedly boiled until it acquires the requisite degree of consistency, usually that of a thick jelly. There are other ingredients used, but for these I cannot vouch.

It seems, according to the different observers, that no one particular poison was used among the Bushmen as a whole, but that each of the scattered clans had its own formula.

The finished product was applied to the arrowpoints in two ways, first, by small areas separted from one another, and scattered over the entire surface on one or both sides; second, by smearing it unevenly over the arrowpoints. The colors of the various poisons differ, running from a dark brown to a light red and to a dirty gray. The dark red suggested the presence of blood which prompted a chemical and microscopic analysis, not only to ascertain whether blood was present, but also to learn the poisonous qualities of the compound.

Five arrows were selected, each having a poison of a different color. These were scraped off and the poison ground fine, and to it was added physiological salt solution. The guaiac test for blood proved to be negative. The iodine test for starch was applied and characteristic black cells were easily demonstrated. The methylene blue stain was taken very poorly, this added to the two former tests may be additional evidence that at least these poisons are of a vegetable nature. The microscopic examination showed (1) no blood corpuscles; (2) a large amount of vegetable matter; (3) some starch cells; (4) a few vegetable fibre cells. This substantiates the chemical tests.

It was interesting to note that on one arrow two different poisons were found to be present, each one giving a different color reaction with the guaiac test. One poison was applied to the tip of the arrowpoint, the other to the base.

The five different solutions were injected subcutaneously into guinea pigs and white rats, producing at first a slight nodding of the head, which symptom disappeared in about one hour. No after effects were noticed. Four days after the injection, the animals were apparently normal. This result cannot be considered conclusive on account of the poison being but partially soluble, and it is possible that the insoluble part may contain the active principle. To this we may add that the age of the substance may have affected the loss of the poisonous qualities.

An English Journal of Pharmacology published a chemical analysis of poisons from arrows from the Kalahari regions obtaining the following result:

> The product was obtained by crushing the insect of the genus *Diamphedia.* The active principle was found to be a toxalbumin, which acts on the red corpuscles producing hematolytic changes involving the dissolution of the hemaglobin. The symptoms of the poisons were paralysis, followed by death. Boiling destroys the effect of the poisons.

This was probably a freshly prepared specimen, although nothing definitely is said about the age of the substance.

Lewin[1] examined the poisons of the arrows collected by Lichtenstein in 1806, which investigation proved an

> alkoloid to be present resembling in action and characteristics, *Haemanthus toxicaris.* The latter may be extracted from the "giftbol," so called by the early Boer colonists, which may have been a source of the Bushmen poison.
>
> The alkaloid found in these arrow poisons, he called Haemanthin, saying that this alkaloid proved to be a very stable product, the poison being one hundred years old at the time of its analization.
>
> The Kung of the northern Kalahari used the larvae of the Diamphidia simplex, the juice of which is obtained by squeezing them, and dried in the sun ready to be applied to the arrows.
>
> This substance contains a toxalbumin.
>
> J. Weise, who studied these larvae in detail, said them to be of the *Blepharida evanida,* which proved to be correct. The poison seems to contain several components. The action of these resulted in disturbances of the central nervous system, respiration and muscular movements. These symptoms were very soon obtained after injecting subcutaneously this juice. The animal becomes quiet, the eyes are closed, the animal assuming an inanimate attitude, finally falling into a deep sleep and dying from respiratory disturbances. Examination proved that the kidneys were involved
>
> The action of this poison is much slower than other vegetable specimens and snake venoms, which compels the hunter to follow his victim for many hours and days before the animal can be captured.

So far as is known, the Bushmen never poisoned water to stupefy the fish before spearing or catching them.

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[1] Lewin, p. 834.

Passarge[1] informs us that

> the Bushmen had two kinds of poison easily differentiated, one of a dark brown, and the other of a very light brown color, the latter being the larvae poison.

This may be correct as far as his observations are concerned, but the collection here described shows dark red and brilliant colored substances as well.

Thompson[2] traveling through South Africa in 1826, was informed by Veldkornet Nel that the

> Bushmen had advanced very much in the last forty years in the manufacture of their poisons. Nel told him that there were, among the Bushmen, snake masters or charmers who could resist their bites. This resistance they could transfer to others by subjecting them to a regular diet containing these poisons.

Apparently reference is made here to the application of the poison, to the scarifications in the skin, a practice known to have existed among them.

The Bushman had his poisons but also his antidotes and for each particular poison his particular antidote. If one were wounded by a cobra or by a "pofadder," one would make an incision near the wound and rub some of the dried poison of the same kind of snake into the cuts. Here we have an example of our modern inoculation, and an effort to obtain an acquired immunity. Some of the Bushmen rubbed the poison into small cuts in order to resist more easily the poisonous effects. So we find here in the former method one aiming at a cure, while the latter is a preventive measure, both interesting as found among a primitive race.

They had also vegetable antidotes for snake bites as discovered by Chapman,[3] quoted by Stow.

> The mode of applying this, however, remained a secret. The antidote for the N'gwa caterpillar poison was a tuber called "Kalahetlue." For snake bites they use the root of a plant called "oekam," which they considered a specific antidote for this, curing them of the most venemous bites. They would either eat eight or ten grains or take it as a decoction, it acting as an emetic. They also scarified making an incision near the wound which they sucked with some of the root chewed in their mouths. This is evidently to prevent the poison from acting upon the gums. The sucking out of the poison is not necessary, but is done by way of precaution.

[1] Passarge, p. 59.
[2] Thompson, p. 391.
[3] Stow, p. 77.

This statement is not a very reliable one; one can easily conceive that as soon as one is bitten by a snake, much of the poison can be prevented from reaching the blood stream if immediately sucked out, a measure recommended when the poison enters the system through an external wound.

Uintjes Bag

This bag (fig. 21), made by the old Bushman's wife, was constructed from one continuous cord. Its width is 17 cm. and its length 22 cm. The material used is a small "biesje" or small reed grass, cut and rolled with a stone to a flat band after removal of the outer covering. The fibres are then separated and chewed until

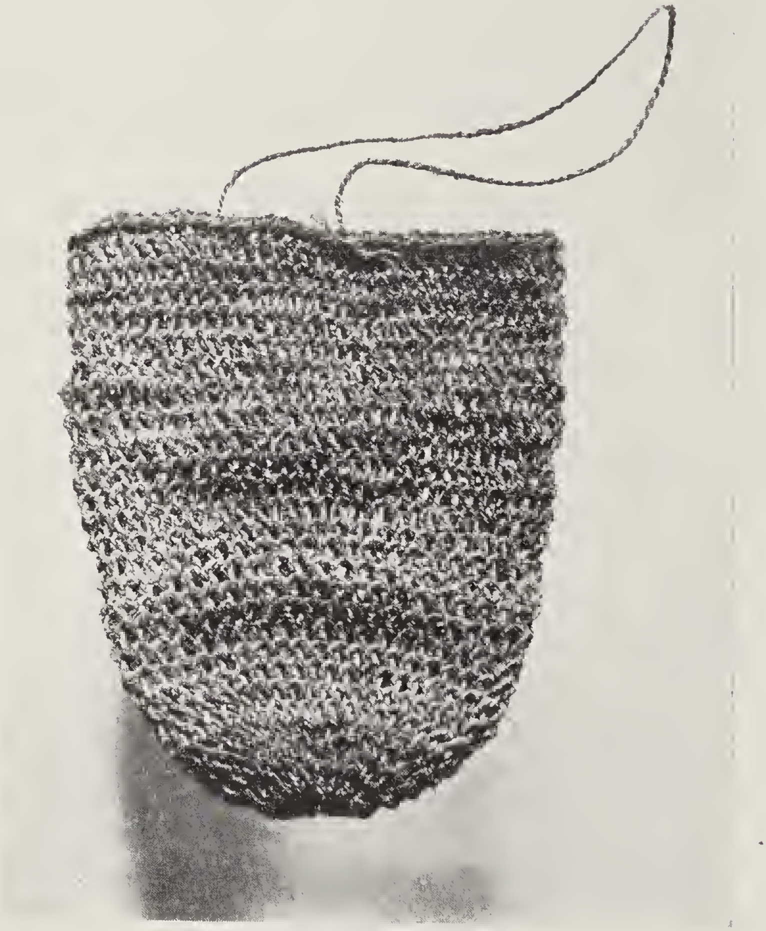
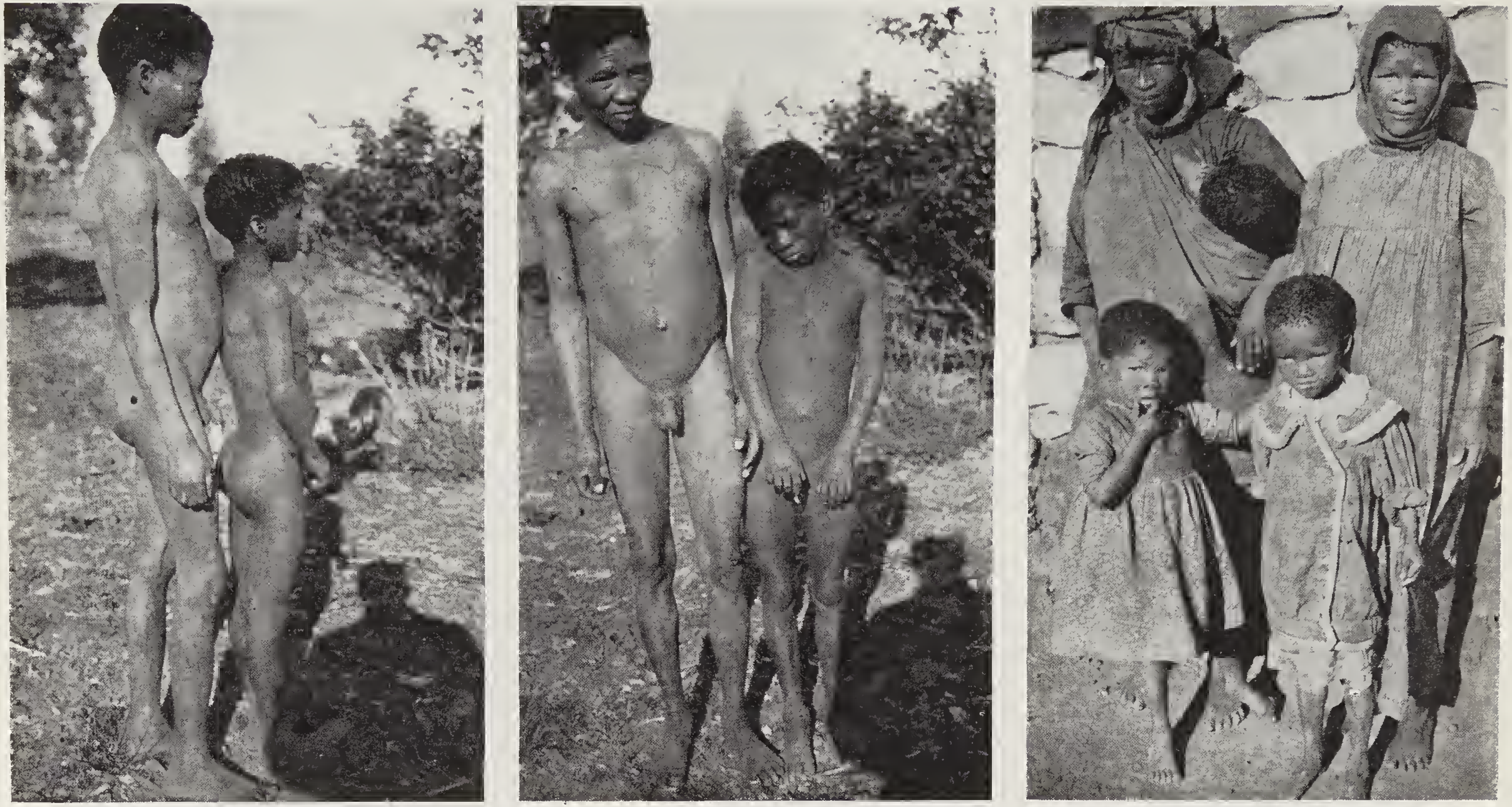


Fig. 21.—Uintjes bag.



BUSHMAN, 42 YEARS OF AGE, HIS SON, 14 YEARS OLD, FRONT AND PROFILE; AND HIS WIFE, HIS SISTER, AND THREE CHILDREN

reasonably pliable. They are then twisted into a rope ready for making the bag and are kept soft by sprinkling with water. In color this rope is similar to ordinary twine and is rather stiff to the touch. The cord by which the bag was slung over the left shoulder in this illustration is shorter than usual. The roots eaten by the Bushmen are collected in these bags. Mr. Van der Zyl, who captured these Bushmen some thirty-five years ago, informed the writer that these bags were being used at that time. These men are still working for this old Boer who claims them to be far superior to the negro as servants, and as herdsmen they are unexcelled.

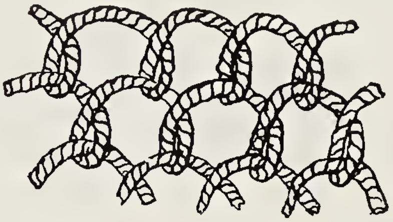


Fig. 22.—Section of Uintjes bag showing "continuous coiled netting."

The style of netting used in this bag is called by Mason[1] "coiled work without foundation," which seems a lengthy and indefinite term. The writer has adopted the name "continuous coiled netting" illustrated in the diagramatical sketch (fig. 22). The name "netting" although knots are used, is not a contradiction of the definition.

Bird Snare

This implement (fig. 23) is made from the same material as the bag. It is very long, measuring about eleven feet, and has ten snares such as those illustrated in the diagram. On one end is a loop by which it is fastened to a stick or stump of a small bush. The other end is left free, but to it is attached a ball of grass. After the snare has been placed in position the Bushman goes away

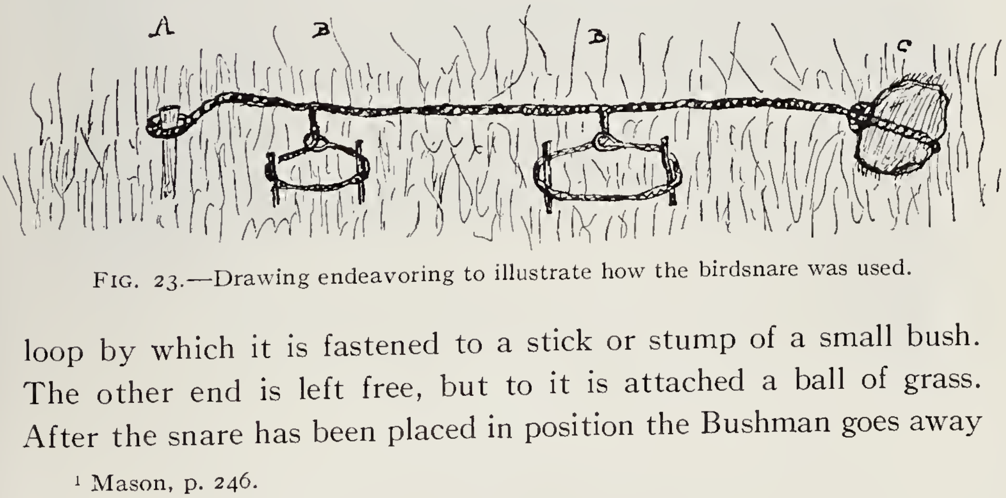


Fig. 23.—Drawing endeavoring to illustrate how the birdsnare was used.

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[1] Mason, p. 246.

a distance and lures the birds towards the snare. This is kept open by strong twigs of grass and are very well placed to mislead the birds. After passing its head through the loop, the bird finds itself caught but in trying to escape is brought down again by the weight of the grass ball. The end fastened to the stick is merely to hold the snare above the ground, and is not for the purpose of fastening it. This is to overcome the breaking of the snare by the sudden strain when the bird tries to get away. The Bushman, seeing the bird caught, runs over quickly and kills his prey with a stick.

Stow does not mention the bird snare, and nothing could be found in their folklore regarding it, which strengthens the writer's opinion that this implement is not one of Bushman origin, but an adapted one from the Bantus.

FISH TRAP

This was made for the writer by the old Bushman (pl. VIII) who informed him that this kind of trap was the one the people of his

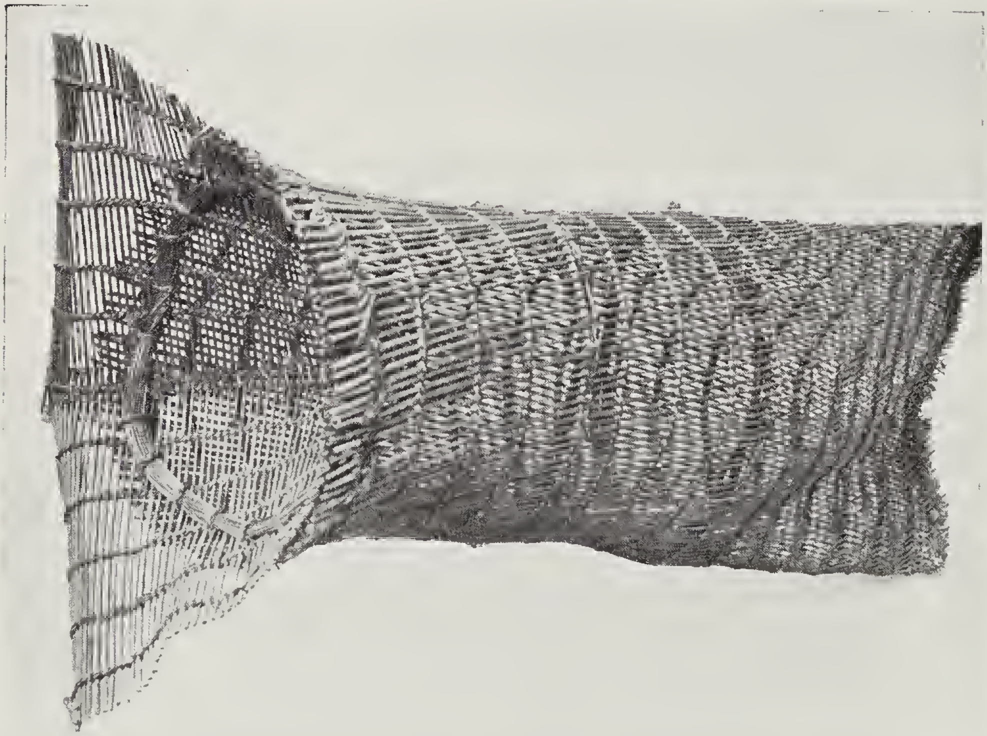

FIG. 24.—Fish trap.

"nation" always used. He made this trap (fig. 24) in one day after walking eighteen miles to obtain the required material, which the Boers call "taai boschje." It grows on the open veld in small patches. The finer specimens of this material are used for the finer work, such as the bird snare and uintjes bag.

The trap is of a very good construction and very strong. It is about three feet long and from a foot and a half to two wide. It is particularly adapted for small streams, the lateral wings serving to guide the fish towards the center. It is circular in front but flattened in the rear. The fish are removed from the flattened end by loosening the grass cords which holds this together. The front is rigid and is never tampered with. The entrance to the trap is cone-shaped, having an oval opening at the distal end of about ten centimeters diameter. The reeds extend beyond this opening, and downward, thus barring the exit, as shown in the drawing (fig. 25).

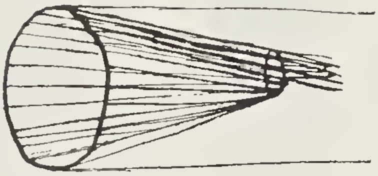

FIG. 25.—Sketch shows arrangement of the reeds which bar the exit from the trap.

It is a question whether the trap is of pure Bushman origin. Stow[1] describes them as being six feet long and two feet wide, but no reproductions can be found in paintings nor are they mentioned in their folklore. The Bantus in different sections in Africa use fish traps of a similar construction, but these are all of a larger size.

THE T'GOERA

This is the only musical instrument made and used by these people, and is also called the Bushman reed. It measures from 70 to 80 cm. in length. The bow is made from a heavy thick reed, 1½ to 2 cm. in diameter. The string, of the two specimens in this collection, is made from a grass twisted very tightly into a thin cord of great strength.

This instrument is also called "goora, gowra, gurra, t'goera, kora," etc. The essential characteristics of the instrument may be seen in the photograph (pl. VII, D) and drawing (fig. 26). The t'goera here illustrated was made by the old Bushman who also made the fish trap, informing the writer that this was the only instrument he had ever played upon, and had never heard of any other instrument being used by his people. It was always taken from place to place and usually played in the stillness of the evening when gathered around the fire, when the monotonous tones and the attention of the player were disturbed by no outside influences.

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[1] Stow, p. 93.

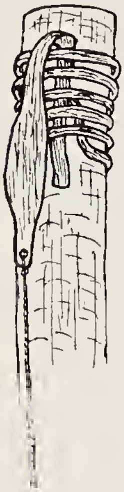

FIG. 26. — Drawing showing shape of quill, mode of attachment to bow and string, and its interposition between the two.

The Hottentots had an instrument similar to the t'goera, but with a difference. It had a half calabash with two holes, through which was drawn the string. This was allowed to pass the full length, thus obtaining a sliding scale.

Peter Kolbe,[1] a German traveler, in 1704 first described the Hottentot instrument and called it the Gom-Gom. Sparrman,[2] and Thunberg,[3] the Swedish botanist, both described this instrument, the former calling it Korā. Barrow mentions having heard and seen them play an instrument, the description of which corresponds to the t'goera. He says the sounds produced by applying the mouth to the quill are varied according to the vibratory motions of the quill and cord by inspiration and expiration. He calls this instrument the "Gowra.'

Lichtenstein[4] describes it also as being played upon by the Hottentots "but is seldom well played except by old herdsmen." This seems to indicate that at the time of his travels the t'goera was losing its usefulness being only well played by old men. Burchell[5] mentions its being played by the Hottentots in the Korrana region, and so does Moodie,[6] but the latter mentions no particular place where he saw this, describing it as a "stick about three feet long with catgut; at one end a piece of quill." By this he means the interposition of the quill between bow and string as shown in the drawing (fig. 26).

[1] Kolbe, p. 271.

[2] Sparrman, p. 228.

[3] Thunberg, p. 102.

[4] Lichtenstein, p. 232.

[5] Burchell, p. 458.

[6] Moodie, p. 225.

It is Moffat[1] who first describes the t'goera as being in use by the Bushmen, and his description is identical with the one made by Moodie.

The quill used is from the "knorhaan" or bustard. The feather is split and then flattened after being made wet. It is then pressed and rolled and allowed to dry, after which it is cut to the required length and shape.

Bleek[2] in one of the Bushman folktales, "The Thunderstorm," speaks of the boy playing on the "goura" and being rebuked for playing at that particular time.

The t'goera is used almost everywhere in South Africa. The writer saw a boy play on it on a Sunday morning in the streets of Lorenzo Marques Delagoa bay. Casalis saw it among the Basutoes, calling it the "lesiba," and Campbell mentions it as being used by the Kaffirs of Algoa bay, Cape Colony. Fritz tells about the Bechuanas playing on it, who called it "goorra, goorah and also lesiba," the same as the Basutoes. He mentions it being played by Hottentots and Bushmen, but particularly by the Koi-Koin Hottentots.

The t'goera is unique in that the vibrations are not caused by tapping with a stick or finger, but by the force of the breath acting upon the quill causing this to oscillate rapidly and violently, while the mouth is used as a resonator, thereby increasing the sound.

It may be called a mouth-blown stringed instrument having a flat piece of quill interposed between one end of the string and reed, which in effect widens the string at that point. When blown upon, the quill will stand first upon its edge, but will be thrown back to its former horizontal position and then further back again to a perpendicular position. Whenever the latter is reached the movement is suddenly checked by the air current and is thrown back suddenly creating a rapid oscillating movement. The result obtained is the same as the one when a blade of grass is placed between the hands and blown upon violently emitting a sound recalling our boyhood days.

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[1] Moffat, p. 58.

[2] Bleek, p. 321.

The t'goera is an instrument played not for an audience, but solely for the player's own benefit and pleasure, which might be called a "private musicale."

To ascertain by whom the instrument was first introduced, is a very difficult problem and becomes more complicated while time passes on. Most of the writers describe it as a Hottentot instrument, but one must be careful in accepting this at its face value or on the absence of reliable ethnological data. The two terms, Hottentot and Bushman, were often synonymous, and although the names may have been used correctly, we have no reliable authority.

Passarge[1] did not find it used in the Central Kalahari region, but did find it south and southeast of it, and among the Hottentots of Great Nama (namaqua?) land. This evidence may prove its origin to be in the south. This considered, he says,

> in connection with the perforated stones and arrows, may prove the instrument to be of a Hottentot origin.

The writter cannot support this hypothesis, first, because the perforated stones have not been proven to originate in the south, but rather northward; second, it contradicts the migratory movements of these peoples; third, on account of the t'goera's being mentioned in the Bushman folklore; and fourth, because Peter Kolbe, the earliest traveler mentioning such an instrument, does not describe the t'goera but the "gom-gom" being played by the Hottentots, and having a sliding scale.

Upon consideration of these facts, it rather may lead us to conclude that the Hottentots were not the originators of the t'goera.

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